General

Guideline Title

Options for documenting functional improvement in conservative care.

Bibliographic Source(s)

Washington State Department of Labor and Industries. Options for documenting functional improvement in conservative care. Olympia (WA): Washington State Department of Labor and Industries; 2014 Apr 17. 29 p. [134 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Practical Application Points

- Outcomes assessment scales provide a concise, valid way to track function and improvement in function. Meaningful change usually involves at least a 30% improvement in score. 50% improvement can typically be considered to be substantial.
- Anchored numerical scales are recommended for tracking routine progress, particularly pain interference with important activities.
- Regional or condition functional outcome scales should be routinely used at baseline and periodic follow-ups. More frequent follow-up is recommended with higher frequency care.
- Psychosocial scales help identify those at higher risk of chronicity and improvement in fear avoidance scales predicts later improvement.
- Several physical performance outcomes also have substantial reported reliability and clinical meaningfulness.

Functional Improvement

- Ideally, care should contribute to better and faster improvement in function and return-to-work than natural progression. To determine degree of improvement, it is recommended that specific function and activity levels be documented before care begins and at periodic intervals as care is provided. Examples of valid and reliable patient self-report strategies and tools are included in this resource.

Curative & Rehabilitative Care

- Washington State workers' compensation law mandates that the care workers receive is curative and/or rehabilitative (WAC 296-20-01002). In non-catastrophic cases, this has been operationalized by clinical documentation that demonstrates improved physical function (including return-to-work) is occurring.

Maximal Medical Improvement (MMI)

- MMI occurs when no marked change in the workers' condition can be expected, with or without treatment. Fluctuations in pain and function may occur once MMI is reached. Over time, improvement or deterioration may occur once MMI is reached. Treatment that results only in temporary or transient changes is not considered proper and necessary (WAC 296-20-01002).

General Health/Biopsychosocial Status Measurement Summary

- Numerous instruments have been used to capture general health status. Instruments typically capture elements of physical and mental function attributable to the respondent's state of health. The most widely used validated examples include the Short Form (SF)-36, Health Status Questionnaire (HSQ)-36, SF-12, and HSQ-12.
- Increasing evidence has emerged that fear of activity and low recovery expectations are associated with poorer outcomes from common musculoskeletal conditions. Increasing attention to assessing and tracking certain mental health and psychosocial health status elements has resulted in using instruments (e.g., STarT Back Screening Tool [SBST]-9, Tampa Scale for Kinesiophobia [TSK-11], Fear-Avoidance Belief Questionnaire [FABQ]) to help determine which interventions should be considered and to assess improvement.

Regional Functional Measurement Summary

- Many anatomic regional area instruments have been developed for the neck, back, and upper and lower limbs. These have the advantage of assessing impact of multiple affected sites with a single instrument. Examples include the Quick Disability of Arm, Shoulder, and Hand (DASH), Neck Disability Index (NDI), Modified Oswestry Low Back Disability Index (ODI), and Lower Extremity Functional Scale (LEFS).
- Instruments addressing a specific joint (e.g., Simple Shoulder Test [SST] for shoulder, Foot and Ankle Ability Measure [FAAM] for foot and ankle) have also been validated and sometimes offer more specificity and sensitivity to monitor response to interventions.

Condition-Specific Measurement Summary

- Instruments have also been developed and validated for a specific condition such as carpal tunnel syndrome, lateral epicondylitis, osteoarthritis, and many other conditions seen in occupational and primary care.

Physical Performance Testing (PPT) Measurement Summary

- PPT may help assess/track conditioning particularly when recovery is not evident by 4 to 6 weeks.

Typical Functional Measurement Thresholds

Baseline	2 to 4 Weeks	4 to 8 Weeks	Beyond 8 Weeks
• Patient-specific function and/or regional or conditional musculoskeletal scales should be considered for baseline and follow-up. • Numerical pain interference scale is recommended at every visit (at least weekly). • If care may be prolonged or return-to-work delayed, psychosocial scales and performance testing are recommended.	• Musculoskeletal, regional or condition-specific scales should typically be re-administered every 2 to 4 weeks. • If improvement is not evident within 2 weeks of care, psychosocial measures particularly fear avoidance should be assessed and tracked.	• It is strongly recommended that any scales used during care be re-administered at discharge. In addition to patient management value, such information provides a baseline for any future adjudication issues if worsening of the condition occurs.	

Clinical Algorithm(s)

An algorithm titled "Functional Measurement Decision-Making" is provided in the original guideline document.

Scope

Disease/Condition(s)

Work-related musculoskeletal conditions

Guideline Category

Diagnosis

Evaluation

Management

Prevention

Rehabilitation

Treatment

Clinical Specialty

Chiropractic

Family Practice

Internal Medicine

Neurology

Physical Medicine and Rehabilitation

Rheumatology

Sports Medicine

Intended Users

Advanced Practice Nurses

Chiropractors

Health Care Providers

Occupational Therapists

Physical Therapists

Physician Assistants

Physicians

Utilization Management

Guideline Objective(s)

- To provide concise summaries of published clinical and scientific literature regarding utility and effectiveness of commonly used conservative approaches for work-related musculoskeletal conditions; history, examination and special studies; recommendations for supportive, manual, and rehabilitative care including practical clinical resources (useable without licensing/charge in practice for non-commercial use)
- To inform care options and shared decision-making

Target Population

Workers with, or at risk for, work-related musculoskeletal conditions

Interventions and Practices Considered

1. Use of patient-specific function and or regional or conditional musculoskeletal scales, numerical pain interference scale, psychosocial scales, and physical performance testing
2. Testing intervals

Major Outcomes Considered

Accuracy and clinical utility of commonly used functional measurement instruments/scales

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

An extensive search was done on measurement of functional improvement for musculoskeletal conditions common to workers' compensation settings on PubMed and other electronic databases. Articles were retrieved by the Labor and Industries librarians. Additionally, citation tracking was performed by department staff and committee members for potentially relevant studies not retrieved from electronic databases.

The bulk of the literature search and review for this update was conducted during spring 2014. Additional searches were conducted as requested by the Industrial Insurance Chiropractic Advisory Committee Subcommittee members. Search results were limited to human adults only and English only. The original literature search was conducted in spring to summer 2012. Studies that were published in the last 10 years were emphasized.

The following keywords were used in PubMed:

Terms for function measurement scales, instruments, etc. were searched in combination with terms specific to common musculoskeletal injuries and anatomy.

- The condition: Functional improvement for musculoskeletal conditions
- Work-relatedness: Occupational health, injury, disease, workers compensation, return to work, disability
- Diagnosis: Musculoskeletal condition scales, psychosocial scales, regional scales (by anatomic region, e.g., lower extremity, shoulder), condition specific scales (e.g., low back pain, carpal tunnel syndrome)

Number of Source Documents

181 reviewed (134 cited)

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Evidence was graded on a 1-5 scale with 1 being the highest grade:

1 = Prospective cohort

2 = Retrospective cohort with case control design

3 = Retrospective cohort narrow spectrum/no case control

4 = Cross-sectional study

5 = Case series

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Individual articles were reviewed by both a clinical expert and epidemiologist with subsequent clinical expert group review to resolve inconsistencies.

Assessing Study Methodologic Quality

Attributes of study methodology quality vary according to the clinical procedure (e.g., diagnostic, therapeutic intervention) looked at, and specific research questions being studied. The American Academy of Neurology's Clinical Practice Guideline Process Manual offers a comprehensive guide to systematic evidence review, quality attributes and consensus process that generally serves as the approach taken by Industrial Insurance Chiropractic Advisory Committee (IICAC).

General attributes identified when extracting evidence from studies include identification of population, the intervention and co-interventions and outcomes being addressed in each study. The clinical questions addressed such as diagnostic accuracy, therapeutic effectiveness, or causation are determined. Studies are extracted into evidence tables including quality attributes and/or ratings which are reviewed both by department staff and committee members (usually 2 per study).

Specific quality attributes include: Diagnostic Accuracy – design, spectrum of patients, validity and relevance of outcome metric; Therapeutic Interventions – comparison groups (no treatment, placebo, comparative intervention), treatment allocation, blinding/masking (method and degree: single, double, independent), follow-up (period and completion), and analysis (statistical power, intent-to-treat). Specific attention is paid to several factors including reporting of outcomes (primary vs. secondary), relevance of outcome (e.g., function versus pain), and meaningfulness (clinically important change versus minimally detectable change).

Synthesizing Evidence

Consideration of study quality (class), significance (statistical precision), consistency across studies, magnitude of effect, and relevance to populations and procedures were taken into account in preparing draft summaries. Special attention was given to clarifying conclusions related to the clinical questions of interest. Evidence, particularly with low tech and highly diffused examination and conservative procedures addressed here, is rarely truly "definitive," even when multiple studies exist. Inconsistent conclusions typically reflect error (systematic, random) and/or bias in

studies. Data pooling via meta-analysis is useful to reduce random error when studies are of sufficient power and methodologic strength. Larger meaningful effect size may increases confidence in findings.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The conservative care resource/guideline process can be described in the following steps:

- Once a topic for a resource/guideline is selected, a subcommittee of the Industrial Insurance Chiropractic Advisory Committee (IICAC) made up of regular members identifies additional content experts to join the subcommittee and/or serve as consultants. Various clinical specialists may provide specific input or be invited to give a presentation to the subcommittee.
- A systematic review and summary of the relevant peer-reviewed clinical and scientific literature is done (primarily by department staff and subcommittee members with specific interest and/or expertise in a topic). Claim and billing data from Labor & Industries may also be reviewed.
- Literature is retrieved, assessed for quality and summarized in evidence tables which are presented to the subcommittee for review. Then at a variable series of group meetings and phone conferences, the evidence with greatest relevance to the resource/guideline topic is highlighted.
- Based on this literature review and assessment by the subcommittee, department staff typically develop an initial draft resource guideline generally organized as follows:
    - General summary of topic, case definition, clinical evaluation, interventions, and clinical progress
    - Checklist for general chronological management with expected clinical and progress thresholds
    - Readily usable functional progress instruments for a given condition
    - Evidence summaries for clinical assessment (e.g., history, examination, imaging and special studies, prognostic and management issues, workers' compensation issues)
    - Evidence summaries for conservative interventions (e.g., physiotherapeutic modalities, bracing, manipulation and mobilization, soft tissue techniques, exercise and rehabilitation approaches, special interventions, common medications [injected and oral]), and workers compensation specific interventions (e.g., ergonomic interventions)
    - Additional materials (glossaries, procedure descriptions, instrument scoring)
    - Evidence and methodology process used in development
    - Citations
- Subcommittee members critique and revise the guideline based on what is most useful for the clinician in diagnosing and treating the condition in question. Additional expertise, consultation, and literature searches may also be added. This results in a second draft guideline that is then shared with the full advisory committee to obtain their input. At this stage specific content experts/reviewers may be sought as the subcommittee identifies particular issues.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

- After the full advisory committee and special reviewers provide input, a third draft is produced and distributed to professional and specialty groups, the Industrial Insurance Chiropractic Advisory Committee (IICAC) and others who have expressed interest for broader public comment. This draft is also posted on the web for a four-week period for public review and comment.
- Once all public comments are received and reviewed, responses are provided by the subcommittee. Both comments and responses are posted on the web.
- The subcommittee may make further revisions to the draft guideline based on public input and any other information they have received. This then results in a fourth draft.
- The fourth draft is presented to the full advisory committee in an open public meeting. Oral comments are invited from the public, and the full committee may recommend further changes, potentially creating a fifth and final draft.
- Once the full committee makes the advisory recommendation to adopt the resource/guideline, it becomes final and is again posted on the web and distributed as before.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

In general, the recommendations were based primarily on a comprehensive review of peer-reviewed published scientific literature. In cases where the data did not appear conclusive, recommendations were based on the consensus opinion of the committee.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Use of appropriate options for documenting functional improvement in conservative care
- Use of evidence-informed discussions by attending providers regarding strategies to track meaningful functional improvement with their patients
- Utilization of validated tools for determining functional status baselines and tracking functional improvement over time (and or with care)

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

This document is intended to inform care options and shared decision-making. It is not a standard of care, claim management standard, or a substitute for clinical judgment in an individual case. This practice resource does not change Washington State Department of Labor and Industries coverage or payment.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Chart Documentation/Checklists/Forms

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2014 Apr 17

Guideline Developer(s)

Washington State Department of Labor and Industries - State/Local Government Agency [U.S.]

Source(s) of Funding

Washington State Department of Labor and Industries

Guideline Committee

The Washington State Department of Labor and Industries' Industrial Insurance Chiropractic Advisory Committee's Subcommittee on Policy, Practice, and Quality

Composition of Group That Authored the Guideline

Subcommittee Members: J.F. Lawhead DC (*Chair*); Robert Baker, DC; Linda DeGroot, DC; Michael Neely, DC

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Financial Disclosures/Conflicts of Interest

The Washington State Department of Labor and Industries is a public state agency and did not receive any outside funding and has no conflicts of interest to report.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Washington State Department of Labor and Industries Web site .

Availability of Companion Documents

A progress checklist and links to a number of generic musculoskeletal, psychosocial, and regional scales are available in the original guideline document .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on July 15, 2014.

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